

SULT1 (h): 293 Lysate: sc-110796

BACKGROUND

The soluble sulfotransferases contribute to the elimination of xenobiotics, the activation of procarcinogens and the regulation of hormones by catalyzing the sulfate conjugation of these substances. Members of the three groups comprising this superfamily show selectivity to certain substrate compounds. SULT1 sulfotransferases exhibit N-sulfating activities of carcinogenic heterocyclic amines and are selective toward phenols, whereas SULT2 enzymes prefer hydroxysteroids and SULT3 family members are selective for N-substituted aryl and alicyclic compounds. High SULT1 activity is associated with an increased protection against many of the carcinogens that lead to colorectal cancer. Activity of the SULT1A1 allele is higher in the elderly, possibly because of protection conferred by SULT1 against cell and tissue damage brought on by aging.

REFERENCES

1. Nagata, K., et al. 1997. Arylamine activating sulfotransferase in liver. *Mutat. Res.* 376: 267-272.
2. Yamazoe, Y., et al. 1999. Sulfotransferase catalyzing sulfation of heterocyclic amines. *Cancer Lett.* 143: 103-107.
3. Engelke, C.E., et al. 2000. Association between functional genetic polymorphisms of human sulfotransferases 1A1 and 1A2. *Pharmacogenetics* 10: 163-169.
4. Meinl, W. and Glatt, H. 2001. Structure and localization of the human SULT1B1 gene: neighborhood to SULT1E1 and a SULT1D pseudogene. *Biochem. Biophys. Res. Commun.* 288: 855-862.
5. Hou, M.F., et al. 2002. Sulfotransferase 1A2*2 is a risk factor for early-onset breast cancer. *Int. J. Mol. Med.* 10: 609-612.
6. Thomas, N.L. and Coughtrie, M.W. 2003. Sulfation of apomorphine by human sulfotransferases: evidence of a major role for the polymorphic phenol sulfotransferase, SULT1A1. *Xenobiotica* 33: 1139-1148.
7. Rossi, A.M., et al. 2004. Phenotype-genotype relationships of SULT1A1 in human liver and variations in the IC50 of the SULT1A1 inhibitor quercetin. *Int. J. Clin. Pharmacol. Ther.* 42: 561-567.
8. Hempel, N., et al. 2004. The human sulfotransferase SULT1A1 gene is regulated in a synergistic manner by Sp1 and GA binding protein. *Mol. Pharmacol.* 66: 1690-1701.

PRODUCT

SULT1 (h): 293 Lysate represents a lysate of human SULT1 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

SULT1 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive SULT1 antibodies. Recommended use: 10-20 µl per lane.

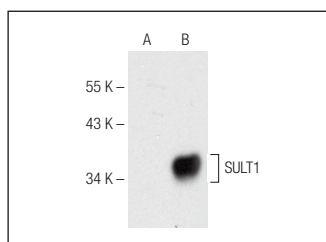
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

SULT1 (B-4): sc-376159 is recommended as a positive control antibody for Western Blot analysis of enhanced human SULT1 expression in SULT1 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



SULT1 (B-4): sc-376159. Western blot analysis of SULT1 expression in non-transfected: sc-110760 (A) and human SULT1 transfected: sc-110796 (B) 293 whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.